

## LEPROSY NEWS

*Information concerning institutions, organizations and individuals connected with leprosy work, scientific or other meetings, legislative enactments, and other matters of interest.*

### INTERNATIONAL LEPROSY ASSOCIATION

#### THE CAIRO CONFERENCE

The General Council of the International Leprosy Association, at a meeting held in London on August 29, 1935, decided to organize a congress of the Association late in 1937 or early in 1938. That would be about eight years since the preliminary organization of the Association was effected during the Leonard Wood Memorial Conference on Leprosy in Manila in February, 1931. It was believed that in the interval sufficient progress had been made in the study of the disease and in experience of various efforts to control it to justify an international gathering for the purpose of coordinating present knowledge and thus of establishing a new basis for future attacks on the problem. The proposed meeting would be the fourth general international leprosy conference.

Considerable thought was given to the question of the place in which the meeting should be held. In terms of magnitude of the leprosy problem the Eastern world, from India to Japan, is unquestionably outstanding. A meeting held somewhere there would permit the attendance of considerable numbers of men from that area, and it would not be impracticable for others from neighboring regions to attend; but it seemed improbable that many from other important leprosy regions could go so far.

On the other hand, in recent years much progress has been made in certain parts of South America, and important developments are imminent in other countries of that continent. It would doubtless be highly instructive could leprosy workers from elsewhere visit that region, and to hold such a gathering there might be helpful to the local governments and other entities that are endeavoring to cope with leprosy. Again, however, the distance of South America from the important leprosy areas in the East would limit very severely the number of men from there who could attend a meeting held anywhere in that part of the world.

These considerations were believed to limit choice of the place to a more central region. All of the three previous international leprosy conferences were held in Europe—at Berlin in 1897, at Bergen in 1909, and Strassburg in 1923. But there is little leprosy in that area, and any meeting held there would be largely didactic. On the other hand Egypt, only a short distance from Europe and on the whole practically as accessible to workers from more distant regions, has a leprosy problem and has of late inaugurated a serious effort to meet it. Moreover, some of the most highly endemic countries in the world are, like Egypt, situated in Africa, countries in which vigorous antileprosy campaigns have been adopted in recent years. After due consideration it was decided to approach the Government of Egypt to ascertain whether it would entertain the suggestion that the proposed meeting be held there.

Following this the General Secretary-Treasurer of the Association took up the matter through proper channels. The response was entirely favorable, and in due course formal agreement to the proposal was received. March 21st, 1938, has been set as the date for the opening of the Congress. The Egyptian Government will extend official invitations to other governments to send delegates, and the authorities of the Association will take up the matter directly with its own members and others who may be interested.

The question of finances presented a difficulty. Whatever facilities the host government may place at the disposal of the Association, there will undoubtedly be unavoidable expenses accruing to it. With its limited membership the Association itself has as yet been able to meet only a minor part of the expense of publication of *THE JOURNAL*, and consequently has no funds for any extraordinary enterprise. However, the American Leprosy Foundation (Leonard Wood Memorial) has generously promised to make a considerable grant toward the expenses of the Congress.

With regard to the organization of the meeting itself, that question is discussed in an editorial in this issue of *THE JOURNAL*. All who may be interested are invited to submit suggestions to the General Secretary-Treasurer of the Association. Details will be published in these pages as they are available.

## REPORT OF MEETING

REPORT OF THE LEPROSY CONFERENCE HELD AT  
BATAVIA, FEBRUARY 18TH, 1936\* (X)

On February 18th, 1936, a conference was held at the Queen Wilhelmina Institute for Leprosy Research, in Batavia, of fifty physicians interested or actively engaged in the study of leprosy in the Netherlands Indies.

The speakers were left free to choose their own subjects. An intended general discussion concerning the conditions that should be met in up-to-date leper asylums had to be omitted. In addition to an introductory discourse ten addresses were delivered, each of them followed by discussion. The program is given below.

1. Introductory discourse. PROF. C. BONNE.
2. The motivation and plan for an investigation into the circumstances and the relative conditions in regions with much and with but little leprosy. DR. P. H. J. LAMPE.
3. Contribution to the endemiology of leprosy. DR. A. MOCHTAR.
4. The leprosy investigation at Lamongan. A. DARWIS.
5. A few theses with regard to leprosy. R. SOETOMO.
6. Some remarks on the origination of leprosy. DR. M. U. THIERFELDER.
7. Tuberculin treatment in leprosy. DR. I. A. FISCHER.
8. Some remarks on cultivation experiments in rat leprosy. DRs. P. H. J. LAMPE AND C. E. DE MOOR.
9. The Takata-Ara reaction in its relation to the epidemiological leprosy investigation in the Karo region. DR. S. POSTMUS.
10. Investigations with reference to the etiology of leprosy. DR. M. J. BOSMA.
11. Causes of death and visceral infection. DR. H. MULLER.

*The development of leprosy foci.*—This development is not governed exclusively by infection or superinfection. It is probable that local conditions also exercise an influence upon the generation of high indices of "manifest" leprosy. The study of such local conditions is to be directed particularly to the soil, utilization of garden compounds, housing conditions, manner of dress, water supply, personal cleanliness and dietary. Undoubtedly coincidentals will be established through an investigation of this kind, though it seems hardly likely that any definite interpretation will be possible in the near future.

An extensive investigation has been initiated in Java in six regions where leprosy is frequent, and in nine where it is rare. The study of the dietary included an accurate daily control of 60 unselected families in regions with high, and 90

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families in regions with low leprosy indices, in total comprising about 900 individuals. That investigation was continued for fully a year in order to obtain seasonal and annual averages; details are not yet available.<sup>1</sup>

*Leprosy indices.*—Java is not a heavily infected country, the average index being estimated to be at most 0.5 per mille (20,000 manifest lepers in a population of 42 millions). The incidence is highest in East Java (1 per mille?), gradually decreases in Central Java, and is lowest in West Java, though the density of the population of these regions is more or less uniform, about 750 per square mile. It is characteristic of Java, more particularly in Central and West Java, as it probably is of all infected countries, that it has foci which are rather distinctly isolated in the midst of a population with but little manifest leprosy. These foci are not to be regarded as on a par with the accumulation of lepers in the larger cities; they are original and not affected by immigration of lepers from elsewhere.<sup>2</sup>

There are now being studied some of the foci in East Java with an index of 3 per mille, the Blora region in Central Java with 2 per mille, and the village of Tjigobang in West Java with more than 10 per mille.

*Darwis, A.*—*Endemiological conditions.*—The leprosy foci are eminently suited for the collecting of endemiological data. ✓

An investigation into the grouping of the sexes and that of the age classes did not provide any new points of view. Twenty-five per cent were below the age of twenty years. The proportion of males to females was 2.7:1. The sex grouping is liable to be influenced by the custom of marrying very young, in which case conjugal leprosy also assumes special norms.

Investigation into the time of appearance of first symptoms had to be limited to those cases with respect to which the assumed sources of infection were still living and accessible. In one region 1,400 contacts were examined. It was found that 93 of them (7 percent) had contracted the disease. Of these, 66 (70 percent) stated that they showed symptoms of leprosy before they were twenty years old. Obviously this material was selected, so that the findings cannot be regarded as establishing the actual proportions.

<sup>1</sup>This investigation was carried on in cooperation with the Department of Agriculture, which has a special service for collecting data concerning diet in general and more particularly the significance of the products of the native garden compounds. The aim is to provide for the production of inexpensive produce suitable to the native dietary. This comparative study of the diet in regions where leprosy is frequent and rare may be a valuable addition to the field study of Doull, Rodriguez et als in Cebu [THE JOURNAL 4 (1936) 141-170].

<sup>2</sup>Recently the writer visited a privately owned estate, 60 miles from Batavia but difficult to reach. The conditions prevailing there have caused the inhabitants to remain for generations with no immigration or emigration of any significance. In this community of 1,600 the index was 20 per mille, there being 30 manifest lepers who were born and had contracted the disease there. The oldest inhabitants remembered the arrival of one leper about fifty years ago when the place, it is said, was entirely free from the disease.

The differentiation of the sources of infection also had to be confined to such lepers with regard to which the sources of infection indicated by them were still living and locally accessible. The complete enumeration of the likely sources of infection is as follows: by brothers or sisters 40 percent, by children of other families 6 percent, by fathers 23 percent, by mothers 11 percent, by other relatives 15 percent, and by husbands or wives (conjugal leprosy) 5 percent.<sup>3</sup>

The above communications centered attention upon the questions of leprosy in children and of indoor and outdoor infections, and on the exact significance of contact infections in general. Not everyone present regarded the greater susceptibility of children as a proven fact, though leprosy is undoubtedly of frequent occurrence in children, so that they constitute favorable material for studying the source of infection. Others pointed out that in judging the sources of infection one had to take into account the alternate care of lepers by various family members, while in the case of children one has to consider whether or not they go to school (outdoor infection in schools). The fact that, everywhere, leprosy is more frequent in men than it is in women—and this holds good also for boys and girls—indicates the possibility that outdoor infection plays an important part in the endemology of the disease.

It was stated that in some regions of the Netherlands Indies there is but slight evidence of contact infection. Two members of the audience had investigated hundreds of contacts in Sumatra; one had discovered one leper, the other none at all. However, the concept of a "contact" is vague and not uniformly defined. The one limited to a person of the same household is too narrow; one must include at least the entire native village (outdoor infection). In judging the possibilities of contact infection age must be taken into account. If, in an environment of adults, contact infection does not occur, that does not exclude the possibility of such infection. The spread of leprosy after it has been imported is not conclusive proof of direct transmission; we have the same phenomenon in the case of plague, which spreads by means of an intermediate factor.

Though not all experience supported the assumption that leprosy is transmitted directly from man to man, the possibility of contact

<sup>3</sup>Within the territory indicated in Footnote 2, all the members of lepers' households were examined (26 families with 127 members). In 11 families, with 52 members, only the father was a leper; in 3 families with 15 members, only the mother; in 3 families, with 13 members, only the grandmother; in 5 families, with 27 members, one child in every family was a leper; in 2 families, each with 5 members, 2 children were lepers, and in 2 families with 6 and 4 members one of the parents and one of the children were lepers. Undoubtedly outdoor infection has played a considerable part in the spread of leprosy in that long existing focus, where only four households showed more than one leper.

infection was not seriously doubted. The problem of the transmission of the disease was formulated as follows:

Leprosy is a dangerous infectious disease, the danger lying in our ignorance concerning the manner of its transmission. Leprosy is a treacherous disease, for even the apparently innocent neural cases may give rise to infection. Endemic infectious diseases, including leprosy, affect the regional inhabitants when still in their childhood, resulting in a certain amount of immunity in the adult. Carriers of bacilli, especially children, are the most likely transmitters of the disease, and the principal sources of infection must not be sought in the cities but in the rural districts.

*Parasites and transmission.*—One speaker concluded, on the basis of epidemiological data, that in transmission a part is played by an intermediary host. He had found that the clothes-louse is met with only in villages where leprosy is gradually spreading, so that this insect may perhaps be regarded as the vector. The disappearance of leprosy from Europe fits in with the parasitic theory. In experimentally infected lice the bacillus remains acid-resistant for only a short time, but it remains color-fast to carbolthionin for a longer period.

Many objections were raised. Insect-borne diseases are usually transmitted only by a special species, so that for the transmission of leprosy one would have to assume one insect or a group of closely related insects, both in the tropics and colder regions. The clothes-louse prefers a cold climate; in fact, it is even a question whether it occurs in the tropical plains. The difference with the head louse is not a simple one. It was pointed out how often one finds solitary primary lesions (not the same as the *porte d'entre*) on uncovered parts of the body, which is hardly consonant with transmission by the clothes-louse. It was doubted whether a micro-organism found to inhabit the clothes-louse could be recognized definitely as the leprosy bacillus. Nevertheless, the hypothesis is worth considering.

*Pleomorphic, optionally acid-resistant micro-organisms in the blood.*—A somewhat revolutionary idea was presented by one speaker: Micro-organisms cultivated from leprosy tissues belong to the group of actinomyces or mycobacteria, pleomorphic and optionally acid-resistant. Particular reference was made to the experiments of Walker. It would be an important fact if the pleomorphic, optionally acid-resistant micro-organisms obtained in cultures could also be found in the tissues of lepers, and the speaker stated that he had observed this keystone to the arguments of Walker and others.

A description and demonstration were made of organisms found in the blood of lepers. These are small, coccoid and ovoid bodies, rodlets, diphtheroids and filaments, varying as to form and size and optionally acid-resistant. Blood preparations from lepers from other regions, stained elsewhere, proved to be positive, while the blood of nonlepers was always negative.

(To be concluded)